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ABSTRACT

The present project is aimed at evaluating and describing the quality, uniformity and standards of vocational rehabilitation throughout the state agencies in the United States. The aim is to identify techniques, personnel, practices, programs and services that do and do not substantially contribute to effective vocational rehabilitation of specific types of clients. A second aim is to collect and store raw and processed data and information in a National Data Bank. The establishment of a National Data Bank will allow for the research use and re-use of data in vocational rehabilitation by research investigators at the Arkansas Rehabilitation Research and Training Center and throughout the nation. The project will have three phases: (1) questionnaires to provide information, examine differences in perceptions, and provide outcome data; (2) state procedures and policies to be compared; (3) an "in-depth" study of the rehabilitation process. The methodology of this latter phase is extensively described in the remainder of the booklet. (Author/NG)

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DISCUSSION PAPERS

Effective Vocational Rehabilitation:
Differential Agency Practices and Client Outcomes

Truax, Charles B. Volume II, No. 5

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ARKANSAS REHABILITATION RESEARCH & TRAINING CENTER
UNIVERSITY of ARKANSAS

EFFECTIVE VOCATIONAL REHABILITATION: DIFFERENTIAL AGENCY PRACTICES AND CLIENT OUTCOMES

Phase III

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I. Description of Project

A. *Purpose:*

The present project is aimed at evaluating and describing the quality, uniformity and standards of vocational rehabilitation throughout the state agencies in the United States. The aim is to identify techniques, personnel, practices, programs and services that do and do not substantially contribute to effective vocational rehabilitation of specific types of clients. A second aim is to collect and store raw and processed data and information in a National Data Bank. The establishment of a National Data Bank will allow for the research use and re-use of data in vocational rehabilitation by research investigators at the Arkansas Rehabilitation Research and Training Center and *throughout the nation.*

Specifically, *first,* these tapes and data will be used to make an intensive study of the antecedents to positive and negative vocational rehabilitation outcome as it occurs in state agency programs throughout the nation.

Secondly, the collection and preservation of a great quantity of information, data and rehabilitation counseling interview tapes from a broad sample of counselors and clients involved in vocational rehabilitation. (These materials will then constitute the initial basis for a National Data Bank which will be made available to other researchers for analysis from different points of view.)

Thirdly, the establishment of a National Data Bank, for the deposit of raw and processed data by researchers throughout the field of Rehabilitation.

A periodic catalog of available data and information on hand will be published so that any institution or qualified investigator may re-use such data for research or educational purposes, subject only to ethical restrictions. Considering the enormous cost and effort currently expended for re-collecting similar data for different research purposes or by differing investigators, a National Data Bank will be a great economic saving. Beyond economics, the existence of a National Data Bank will stimulate more researchers to be

interested in rehabilitation problems, and, greatly enhance the quality of research being done by graduate students and doctoral candidates in rehabilitation programs.

Such data will allow for analyses aimed at determining techniques, personnel programs and services that are most (and least) effective in rehabilitating specific types of clients. Such analyses will be carried out by the Research Faculty and Staff of the Arkansas Rehabilitation Research and Training Center.

The Research Faculty and Staff of the Arkansas Rehabilitation Research and Training Center will also initiate studies re-using data deposited by other investigators in the field of the behavioral aspects of rehabilitation. The proposed program is intended to meet the following specific aims with respect to data and tape collection on the rehabilitation process:

1. To collect basic raw data and information on at least 5200 cases of individual rehabilitation as practiced by 520 qualified but heterogeneous rehabilitation counselors – including expensive pre and post-evaluation of patient behavioral and personality functioning and, via tape recording, to capture and preserve for analysis the verbal transactions and decision making of all counselor-client contacts.

2. To evaluate effective and ineffective case outcomes in relation to types of services provided, personnel, client characteristics and organizational patterns.

3. To relate measures of counselor empathy, warmth, genuineness and other counselor characteristics shown by research to affect case outcome obtained from the tape recordings to measures of: a) client initial status; b) client improvement or benefit; c) client deptn of self-exploration; and, d) client disability type and severity and demographic characteristics.

4. To examine the contribution to outcome of other client, counselor or transactional characteristics.

5. To evaluate the contribution of the client's initial status and degree and type of disability to degree and type of his behavioral change and vocational outcome.

6. To evaluate the generality of prior findings by sub-analyses of the large heterogeneous counselor population in terms of professed orientation and training in rehabilitation counseling practice. (i.e., are counselors with degrees in Rehabilitation Counseling more effective than other counselors? Is the type and structure of rehabilitation counseling training related to counselor effectiveness?)

7. To preserve the tape recordings of the counseling transactions, client pre and post-counseling status evaluations, and counselor biographic information for future studies and to make these available for educational and research purposes to agencies, institutions and investigators, subject only to ethical restrictions.

B. *Type*

Research programmatic research, and a national facility for data deposit for research into case management, counseling, and behavioral aspects of the rehabilitation process.

C. *Justification:*

State agency operations have proven their overall effectiveness in the rehabilitation of the physically and mentally disabled and there is reason to believe that similar overall effectiveness will hold for the socially, culturally, and educationally disadvantaged or disabled (as shown in analyses of existing data by Ronald Conley for the Program Analysis Group in HEW Program Analysis No. 13, Vocational Rehabilitation, December, 1967, and by the earlier cost-benefits analysis of Vocational Rehabilitation, August, 1967).

However state administrators frequently lack sufficient evidence and information for administrative decision making in order to provide the most effective services and programs for all who need them. That need for solid evidence on which to base goals and standards that insure high quality services and on which to base the evaluation of the effectiveness of such services is of considerable national concern, has been stated by the Council of State Administrators of Vocational Rehabilitation (CSAVR). Specifically, the CSAVR Goals and Standards Committee in the charge issued them and the October, 1967, Discussion Paper prepared for the Committee by Mr. Whitten of the NRA gives emphasis to this national need.

While there are advantages and disadvantages of both uniformity and lack of uniformity of services, administrators must ultimately base decision making on what organizational patterns, personnel, programs, and services are or are not effective in vocational rehabilitation case outcomes.

The present project aims at providing such information.

There exists considerable evidence of lack of uniformity of services and programs both within and between states. Whether or not this is a real problem of major concern to RSA and CSAVR and NRA must ultimately depend on relationships to case outcomes. Thus wide variation in supervisor-counselor ratios, counselor-client ratios, the emphasis given to different services available to handicapped individuals, wide variations in the use of rehabilitation facilities and in training and patterning of state agency personnel, etc., *may or may not* be related to vocational rehabilitation outcomes. For the most part, solid evidence of these vital questions is lacking. It should be specifically pointed out that this lack of information about relationships between different patterns of services, agency organization, personnel, and types of services and their effects on rehabilitation case outcomes is not unique to the field of rehabilitation. A similar case could be made for welfare, mental health, health, labor, etc., etc.

After considerable discussion and meetings, a research strategy was agreed upon by the Committee on Goals and Standards of the CSAVR (chaired by Mr. Reece of Tennessee) and in coordination with the Institute and Study Group as well as Mr. Blankenship of RSA, Mr. Whitten of NRA and supervisory personnel of the Arkansas Rehabilitation Research and Training Center.

The research faculty and staff at the Arkansas Rehabilitation Research and Training Center with its current staff will be concerned with three phases of the overall project which will be ultimately combined and related to the present proposed project. The phases of the study are:

1) A series of questionnaires to be sent to State Rehabilitation Administrators, counselors, and state rehabilitation facilities. The questionnaire is completed and – at the recommendation of the Goals and Standards Committee – has been sent to seven states which have members represented on that Committee. The questionnaire is intended to a) gather information to questions to which the answers are not currently very clear, b) examine the differences in perceptions of various State Rehabilitation staff on important items, and c) provide data to incorporate in prediction formulas related to client outcome.

2) The examination and comparison of state procedures and policies as depicted by current Vocational Rehabilitation Research and by state manuals. An initial analysis of Federal statistics from 1967 along with a small amount of previous data has been reported to the Committee in the form of an initial report, Uniformity and Differential Rehabilitation Practices in the State-Federal Vocational Rehabilitation Program, Initial Report, Arkansas Rehabilitation Research and Training Center, University of Arkansas, October, 1968. More complex statistical analyses are currently being completed and additional analyses of the agencies for the blind are in the process of being examined. State Manuals, Counselor and Procedural Manuals, Cooperative Agreements, and other information has been sent to the Center for analysis from all but seven states. A preliminary report of the objectives, background, and procedures of "Phase II" of the project was presented to the Goals and Standards Committee and recommendation to continue the analysis of such information was suggested by the committee members. Currently, there is enough information which has been received by the 45 states that descriptive examination of the manuals can be provided and the relationships of certain items in the manuals to particular kinds of case services can be analyzed. Such information is forthcoming in the immediate future. Cooperation with Prime Study Group II on Rehabilitation Services is resulting in a close examination of the state manuals of 34 states and materials from other states to determine standards for termination of case services.

3) The "in-depth" study which involves data and tape collection of the rehabilitation process. This is the presently proposed project. The present proposed project is aimed at the third aspect of the overall three-pronged research effort: the evaluation of individual case outcomes and their relationships to agency policy, structure, services, personnel, and other related factors.

A coordinating committee made up of the Committee on Goals and Standards, a representative of RSA, a representative of NRA, and the supervisory personnel of the Arkansas Rehabilitation Research and Training Center will have overall direction of the present project. Thus research analyses will focus on the priorities of needed information set by the Committee. This will insure the practical utility of the research analyses in their application to rehabilitation practices in the 52 state programs.

Associated with the great majority of vocational rehabilitation cases are problems in behavioral or personality functioning. This is true whatever the client's primary disability may be. As such, the role of the vocational rehabilitation counselor is of great importance in attempting to facilitate the vocational rehabilitation process. It is, therefore, of great importance to identify and investigate those aspects of the counseling process which serve to change – for better or for worse – vocational rehabilitation clients.

Considerable amounts of money are spent each year in all states on vocational rehabilitation services. Research to date in the areas of counseling and psychotherapy has yielded considerable knowledge about the interpersonal processes which are facilitative. Certain counselor behaviors such as warmth, empathy, and genuineness are known to lead to improved levels of client functioning. However, considerably more work needs to be done on the measurement and specification of these counselor qualities, and on the ways in which they interact with other variables, so as to more effectively train and retrain more effective counselors. In addition, there are other important variables in the counseling situation which should be measured and studied.

The present proposed project would preserve on recording tape all contacts between counselors and clients, would extensively and intensively measure clients before and following rehabilitation counseling to provide substantial criteria for rehabilitation outcomes, would record all services and costs for each client, and would have available from the concurrent questionnarie data the organization, personnel, and service pattern for the individual agencies. It will then be possible to study in detail those aspects of the rehabilitation process which lead to effective vocational rehabilitation. By amassing such data on considerable numbers of counselors and clients (cases) it will be possible to study simultaneously and separately the agency, counselor and client factors contributing to case outcome. It will be possible, then, to have a substantial body of tapes and data, collected in the naturalistic setting, for systematic analysis in the scientific laboratory. The National Data Bank will allow scientists of all theoretical orientations or persuasions to analyze all or portions of the data from divergent viewpoints to develop new information about essential variables in the rehabilitation process.

The collection of this basic set of information and data on the *in vivo* practice of professional rehabilitation counseling represents the initial major undertaking of the total project. It is this basic set of information and data that will be analyzed to provide more solid information concerning the antecedents and outcome of effective vocational rehabilitation.

From the long-term point of view, collection of this basic set of data and information complete with pre and post-counseling measures of client status and tape recordings of all counseling contacts will make possible a variety of future investigations by other investigators. This data will be kept as part of a National Data Bank at the Arkansas Rehabilitation Research and Training Center, University of Arkansas, and will be made available to any qualified person or institution for research purposes. Thus the basic raw data and information on a minimum of 5,200 cases of counseling obtained from a minimum of 520 experienced rehabilitation counselors will be made available for use by other qualified researchers or institutions. Faculty from more than ten university rehabilitation counselor training programs have already indicated a strong interest in the research use of such data, and if actually available its use would multiply – both by faculty and by graduate students for thesis and dissertation research. It will thus make possible outcome research in rehabilitation counseling by other senior investigators (or, under their supervision, graduate student theses and dissertations, etc.).

Separately from releases for research purposes, client, counselor, and agency release forms will be obtained for the use of tape recorded sessions for educational purposes. This basic set of materials will make possible the use of tape recordings of outstanding rehabilitation counseling (as measured in terms of marked patient or client improvement) for educational and training purposes. These will be made available to agencies and educational institutions for more effectively training in the rehabilitation process.

D. *Methodology:*

The specifics of research methodology is the following:

a) The methodological collection of data which very closely follows the methodological collection of data for a major project sponsored by the National Institute for Mental Health where a diverse nationwide sample of psychotherapists has provided tape recordings and other information,

b) the close direction of the project coordinating committee which includes the members of the Goals and Standards Committee as well as other individuals to help determine procedures and priorities of research analyses which might better serve the needs of CSAVR, RSA, and NRA, and

c) the "ironing" out of the most precise specifics in methodology by beginning the overall project with seven of the states which compose the Goals and Standards Committee of CSAVR. The

beginning effort of the collection of all the data is currently underway in the following seven states: Arkansas, Oklahoma, Tennessee, Minnesota, Nebraska, Alabama, and Oregon. Several other states have already expressed the view that they are ready to begin the project as soon as the Research and Training Center has enough resources to logistically cope with the expansion beyond these initial seven states.

1. *Rehabilitation Counseling Data and Information Collection:*

A basic set of data taken from pairs of clients seen in individual counseling by a given counselor will be collected. From each of the at least 5,200 cases seen by the 520 experienced rehabilitation counselors, the following basic set of raw data and information will be obtained: (1) pre-counseling measures of vocational personality and behavioral functioning; (2) post-counseling measures of vocational personality and behavioral functioning, (or yearly evaluations for continuing clients); (3) follow-up evaluations of vocational, personality and behavior functions of clients; (4) counselor and client measures of perceived therapeutic conditions and client depth of self-exploration; (5) complete tape recordings of all counseling sessions which will allow the preservation of major aspects of the vocational rehabilitation counseling process for objective measurement of counselor-offered therapeutic conditions, client interaction, and other process variables; (6) agency case records and standard statistics; (7) vocational status and vocational experiencing information and biographical questionnaires concerning the training and professional orientations of counselors, and amount and kinds of relevant experience.

Since the CSAVR has endorsed the research effort and the sub-committee of Goals and Standards is a direct overseer of the project operations, the cooperation of the state agencies is cooperative and encouraging.

The collection of data and information from all sources – counselors, clients, and agencies is especially safeguarded for confidentiality by special procedures beyond the already stringent safeguards following American Psychological Association ethical standards, etc. For example, the members on the Goals and Standards Committee of CSAVR offer suggestions for assuring that the practical collection of data is not mishandled and the Arkansas Research Center already has an ethics committee at the University of Arkansas composed of lawyers, professors, ministers, etc., to provide an additional check for our most serious concern for confidentiality of all agents involved in the vast project.

2. *Selection of Counselors:*

Initially, ten counselors in each state agency who are carrying a caseload of rehabilitation counseling clients will be asked to participate. The

ten will be selected in a stratified sample so as to be representative of the agency. In this way we can hope to have represented the widest sample of counselors and types of clients. On a given calendar day each counselor will be asked to designate his next two rehabilitation counseling clients as research clients and then to treat them as he normally would, with the exception that he will collect the data required by the research design, and tape-record all contact with those clients. He will continue to record interviews with two clients at a time until information for ten clients is completed.

3. *Selection of Clients:*

For each counselor there will be selected a qualified psychometrist, psychologist or other person qualified in testing procedures in the counselor's geographic area. He will administer evaluation tests and schedules and collect other data about the client at the outset, after case closures (or after one year for continuing cases) and at follow-up. When such a person is located and prepared to handle the evaluation procedures, the next two clients assigned or referred to the counselor will be designated as research clients and will receive the pre-counseling behavior and vocational status evaluation (and the necessary release forms will be signed). Even if the client should have only one contact and not accept services the pre-rehabilitation counseling client evaluation will be available for analysis to determine if certain kinds of clients, counselors, or transactions are associated with premature termination, etc.

4. *Tape-recording of Cases:*

Where necessary, tape recorders will be made available to the agencies or counselors on a loan basis for the duration of the two research cases. Blank tapes will be supplied with mailing envelopes so that the participating research counselor can send the tape recordings in batches of two (four sessions) to be stored at the Arkansas Rehabilitation Research and Training Center for analysis. This will allow project personnel to keep up-to-date on data collection and the progress of the case so that missing data will be minimized.

5. *Evaluation of Degree of Constructive, Vocational, Behavioral or Personality Change:*

The present approach is to use multiple measures of vocational, behavioral and personality functioning pre-counseling, post-counseling, and follow-up (and for continuing case evaluation on a yearly basis). It has been apparent for some time that positive client change is far from a unitary phenomenon and that many clients show a mixture of positive and negative changes. Even when there are totally uniformly positive or negative changes, they vary in amount of change on various indices.

Prior evidence (including Cartwright and Roth's 1957 factor analysis of ten counseling outcome measures) suggests the value of obtaining information from different sources. The present strategy of evaluation involves the collection of information on patient behavioral and personality functioning from: 1) a psychometrist; 2) the client; 3) the counselor; 4) a close friend or relative of the client; 5) the employer; and, 6) objective measures of social functioning.

Specifically, the data and information collection and scheduling of collection is as follows:

Rehabilitation Counseling Research Plan For Measurement Of Client Behavioral And Personality Change

Arkansas Rehabilitation Research and Training Center

COUNSELING RESEARCH PLAN
(Keep in Your Files)

A.

COUNSELING RESEARCH PLAN (Keep in Your Files)

A. After one Interview
   1. Counselor
      a. Hands client sealed packet containing MMPI, Current Adjustment Rating Scale, Initial Q Unpleasantness Survey, Poms, Vocat Questionnaire, release of information forms, and client cover letter. Asks client to fill out these scales and forms and to give them to the psychometrist.
      b. Refers client to psychometrist
      c. Fills out "Biographical Information" and "Release of Information" forms
      d. Fills out Current Adjustment Rating Scale on the client
      e. Mails forms to Fayetteville, Arkansas
   2. Psychometrist
      a. Interviews client according to structured PSS
      b. Rates client according to Current Adjustment Rating Scale
      c. Rates client according to Social Ineffectiveness Scale
      d. Hands client Self and Ideal Q-Sort and asks him to complete it in the office

e. Asks client for packet of forms he was given by counselor. Checks to make sure all forms have been completed by client.
f. Mails all forms to Fayetteville, Arkansas

3. Client
   a. Fills out MMPI
   b. Does Self and Ideal Q-Sort in psychometrist's office
   c. Fills out Current Adjustment Rating Scale
   d. Fills out Initial Questionnaire
   e. Fills out Unpleasantness Survey
   f. Fills out Poms
   g. Fills out Vocational Status Questionnaire
   h. Fills out Friend's Address Form and asks friend to complete CAR Scale
   i. Fills out release of information forms

4. Friend
   a. Fills out Current Adjustment Rating Scale
   b. Mails form to Fayetteville, Arkansas

B. After three interviews
   1. Counselor
      a. Fills out Depth of Self-Exploration Rating Scale
      b. Fills out Relationship Questionnaire
      c. Mails his forms to Fayetteville, Arkansas
      d. Gives client a packet containing the Depth of Self-Exploration Rating Scale (client form) and the Relationship Questionnaire (client form) and asks him to fill them out and send them to Fayetteville, Arkansas

   2. Client
      a. Fills out Depth of Self-Exploration
      b. Fills out Relationship Questionnaire
      c. Mails his forms to Fayetteville, Arkansas

C. If client is carried for more than one year at the end of the first year
   1. Counselor
      a. Hands client sealed packet containing MMPI, Current Adjustment Rating Scale, Unpleasantness Thermometer, and Poms. Asks client to fill out these scales and forms and give them to the psychometrist when he next meets with him.
      b. Refers client to psychometrist
      c. Fills out Current Adjustment Rating Scale
      d. Mails form to Fayetteville, Arkansas

2. Psychometrist
   a. Interviews client according to structured PSS
   b. Rates client according to Current Adjustment Rating Scale
   c. Rates client according to Social Ineffectiveness Scale
   d. Hands client Self and Ideal Q-Sort and asks him to complete it in the office
   e. Asks client for packet of forms he was given by counselor. Checks to make sure all forms have been completed by client
   f. Mails all forms to Fayetteville, Arkansas

3. Client
   a. Fills out MMPI
   b. Does Self and Ideal Q-Sort
   c. Fills out Current Adjustment Rating Scale
   d. Fills out Unpleasantness Thermometer
   e. Fills out Poms
   f. Fills out Vocational Status Questionnaire

4. Friend
   a. Fills out Current Adjustment Rating Scale
   b. Mails form to Fayetteville, Arkansas

5. Employer (providing client is employed during rehabilitation counseling)
   a. Fills out Vocational Status Questionnaire (Employer's Form)
   b. Mails form to Fayetteville, Arkansas

D. If client is carried for more than two years at the end of the second year
   1. Counselor
      (same as C1)

   2. Psychometrist
      (same as C2)

   3. Client
      (same as C3)

   4. Friend
      (same as C4)

   5. Employer
      (same as C5)

E. If client is carried for more than three years at the end of the third year
   1. Counselor
      (same as C1)

2. Psychometrist
(same as C2)

3. Client
(same as C3)

4. Friend
(same as C4)

5. Employer
(same as C5)

F. If client is carried for more than four years at the end of four years

1. Counselor
(same as C1)

2. Psychometrist
(same as C2)

3. Client
(same as C3)

4. Friend
(same as C4)

5. Employer
(same as C5)

G. After counseling is completed

1. Counselor
   a. Hands client sealed packet containing MMPI, Current Adjustment Rating Scale, Follow-up Questionnaire, Unpleasantness Thermometer, Poms, and Vocational Status Questionnaire. Asks client to fill out these scales and forms and give them to the psychometrist when he next meets with him.
   b. Refers client to psychometrist
   c. Fills out Current Adjustment Rating Scale
   d. Mails form to Fayetteville, Arkansas

2. Psychometrist
   a. Interviews client according to structured PSS
   b. Rates client according to Current Adjustment Rating Scale
   c. Rates client according to Social Ineffectiveness Scale
   d. Hands client Self and Ideal Q-Sort and asks him to complete it in the office

e. Asks client for packet of forms he was given by counselor. Checks to make sure all forms have been completed by client.
f. Mails all forms to Fayetteville, Arkansas

3. Client
   a. Fills out MMPI
   b. Does Self and Ideal Q-Sort
   c. Fills out Current Adjustment Rating Scale
   d. Fills out Unpleasantness Thermometer
   e. Fills out Poms
   f. Fills out Vocational Status Questionnaire
   g. Fills out Follow-up Questionnaire

4. Friend
   a. Fills out Current Adjustment Rating Scale
   b. Mails form to Fayetteville, Arkansas

5. Employer (after at least 30 days suitable employment)
   a. Fills out Vocational Status Questionnaire
   b. Mails form to Fayetteville, Arkansas

H. One year after completion of counseling
1. Counselor
   a. Fills out Current Adjustment Rating Scale (if possible)
   b. Mails form to Fayetteville, Arkansas

2. Psychometrist
   a. Interviews client according to structured PSS
   b. Rates client according to Current Adjustment Rating Scale
   c. Rates client according to Social Ineffectiveness Scale
   d. Hands client MMPI, Self-Ideal Q-Sort, Current Adjustment Rating Scale, Unpleasantness Thermometer, Poms, Follow-up Questionnaire, Vocational Status Questionnaire, and asks him to complete it in the office
   e. Mails all forms to Fayetteville, Arkansas

3. Client
   a. Fills out MMPI
   b. Does Self-Ideal Q-Sort
   c. Fills out Current Adjustment Rating Scale
   d. Fills out Unpleasantness Thermometer
   e. Fills out Poms
   f. Fills out Vocational Status Questionnaire
   g. Fills out Follow-up Questionnaire

4. Friend
   a. Fills out Current Adjustment Rating Scale
   b. Mails form to Fayetteville, Arkansas

5. Employer (Follow-up after one (1) years' employment)
   a. Fills out Vocational Status Questionnaire
   b. Mails form to Fayetteville, Arkansas

References for Measuring Instruments

A. MMPI
   1. Hathaway, Starke R. and McKinley, J. C. A Multiphasic personality schedule (Minnesota): III. The measurement of symptomatic depression. *Journal of Psychology,* 1942, 14, 73 – 84.

B. Self and Ideal Q-Sort
   1. Butler, J. M. and Haigh, G. V. Changes in the relation between self-concepts and ideal-concepts consequent upon client-centered counseling. *In Psychotherapy and Personality Change,* 55 – 75 (Rogers, C. R. and Dymond, R. F. Eds.), University of Chicago Press, Chicago, 1954.

C. Unpleasantness Survey
   1. Lang, P. J. Experimental studies of desensitization psychotherapy. Chapter in: *The conditioning therapies.* J. Wolpe, A. Salten and L. J. Renya (Eds): Holt, Rinehart, and Winston, 1964.

D. Current Adjustment Rating Scale
(adapted form)
   1. Miles, H. W., Barrchee, Edna L., and Finesinger, J. E. Evaluation of psychotherapy. *Psychosom. Med.,* 1951, 13, 83 – 105.

E. Initial Questionnaire
(adapted form)
   1. Fiske, D. W. and Goodman, G. The post-therapy period. *J. Abnorm. Psychol.,* 1965, 70, 169 – 179.

F. Poms
   1. Lorr, M. and McNair, O. M. Methods relating to evaluation of therapeutic outcome. In Gottschalk, L. A. and Auerbach, A. H. (Eds.) *Methods of Research in Psychotherapy.* New York: Appleton-Century-Crofts, 1966.

G. Psychiatric Status Schedule

1. Spitzer, R. L. The Mental Status Schedule: Potential use as a criterion measure of change in psychotherapy research. *Amer. J. Psychother.*, 1966, 20, 156 – 157.

H. Depth of Self-Exploration
(adapted form)

1. Truax, Charles B. A tentative scale for the measurement of depth of interpersonal exploration (Dx). Discussion Paper, No. 29, Wisconsin Psychiatric Institute, May, 1962.

I. Relationship Questionnaire
(adapted form)

1. Barret-Lennard, G. T Dimensions of therapist response as causal factors in therapeutic change. *Psychol. Monogr.*, 1962, 76, No. 43, (Whole No. 562).

2. Truax, C. B Therapist empathy, warmth, and genuineness and patient personality change in group psychotherapy: A comparison between interaction unit measures, time sample measures, and patient perception measures. *J. Clinic. Psychol.*, 1966, 22, 225 – 229.

It should be stressed that the structured Psychiatric Status Schedule interview was designed to tap virtually all areas of behavioral and personality functioning including objective evidence of functioning in the world of work (school adjustment for students, or housewife level of functioning for housewives), interpersonal relationships, leisure activities, and family adjustment. It represents a very comprehensive evaluation of behavioral and personality functioning. Despite its name it has been developed for use with non-psychiatric as well as psychiatric populations. This instrument, developed by Spitzer at the New York State Biometrics Laboratory, can be analyzed to compare groups of clients on individual items, first order factors, and total level of functioning as well as specific problems that act as barriers to vocational functioning.

An overall analysis will be made using a Final Outcome Criterion for each case by converting scores on each measure to standard scores and then obtaining an average standard score across the multiple measures per patient. Then evaluation for positive or negative change will be based on the differences in average standard scores from pre to post (or pre to follow-up or pre to late) evaluations. Thus, while strong arguments could be leveled against the infallibility of any single measure, if major improvement occurs on the average of varied indices then it would be difficult to argue that the given client was not improved, or vice versa.

Using computers, analyses will also be made using the individual indices of outcome and such factual information as employment, earnings and other relevant functioning. Additionally, scoring on other measures, such as Cattell's personality factors, will be scored from this set of data. Analyses will thus reflect on overall outcome as well as specific case outcomes.

Records of monetary expenditures per individual case in conjunction with past, initial, post-closure and follow-up earnings will allow for solid cost-benefit analyses. Prior evidence on cost-benefit ratios has been loosely "estimated" due to inadequate data (see Conley report and book versus RSA (VRA) report). The cost-benefit ratio will be analyzed in relationship to client disability type and client characteristics as well as in relationship to types of services, programs, organizational patterns and personnel characteristics of state agencies. Such analyses should provide information for administrative evaluation of the agency programs and emphases. Prior evidence suggests that from a cost-benefit point of view low productivity clients are as good a rehabilitation investment as the white, male, well educated, married orthopedic disabled. The present data, based on more solid and complete information, will aim at confirming or denying such expectations and provide new information needed for program planning by state agency administrative personnel.

The practical value of the information and solid evidence obtained from analyses of the collected data on over 5,000 cases will be enhanced by the guidance and direction of the Project Coordinating Committee (itself largely composed by the Committee on Goals and Standards of CSAVR, with additional representatives of RSA, NRA, and the ARR&TC).

6. *Measurement of counselor-offered therapeutic interpersonal skills of accurate empathy, nonpossessive warmth, and genuineness, and client depth of self-exploration from recorded interviews.*

Using the standardized procedures reported in a variety of studies (Truax and Carkhuff, 1967), three-minute samples of client-counselor interaction will be selected randomly from the middle one-third from every fifth interview (for short-term cases, every second interview) and randomly assigned code numbers. These samples will be presented in random order to independent sets of trained raters. Three raters will be used in each set, one set of each of the following four scales; the accurate empathy scale (Truax, 1961a, 1967); the nonpossessive warmth scale (Truax, 1962, 1967); the genuineness scale (Truax, 1962, 1967); and the client depth of self-exploration scale (Truax, 1962, 1967). Studies to date have indicated good reliability (Ebel's Intraclass $r = .63$ to $.94$) in the majority of studies conducted with these specific scales in a variety of client and patient populations. The raters will have no knowledge of where in the rehabilitation process a given sample was obtained (early or late), or outcome of the case from which a given sample was obtained – they will simply have the

coded three-minute samples presented in random orders. Previous findings suggest that reliable judgments are made by raters trained in the use of a given scale, but not otherwise trained in the areas of counseling, psychotherapy, or psychopathology. For this reason college students without training in counseling practices will be used as raters. Separate groups of raters will be trained on different scales so that no rater will rate more than one scale. They are typically trained to a minimal rate-rerate criterion standard of .50 correlation.

7. *Overall statistical analyses:*

Analyses of variance and analyses of variance of multiple regression will be carried out with the Final Outcome Criterion (average standard score difference from pre to post-therapy) and the specific vocational and behavior change outcome measures as the dependent variable. The measures of counselor interpersonal skills (accurate empathy, nonpossessive warmth, counselor genuineness or nondefensiveness), client self-exploration, and indices of client initial status will serve as the independent or predictive variables, using the mean values per case. These analyses will provide information on the significance of the relationship of these variables to counseling outcome and will be replicated using client initial status as a covariate to estimate the contribution of these factors to client counseling benefit (controlling for the degree to which the client with a given initial status may normally be expected to change without differential treatment).

Similar analyses will be carried out to evaluate the significance of biographic and prior experience factors on counselor and client, type of training of counselor, and similar external factors.

Finally, factors obtained from agency case records, agency programs, personnel and organizational patterns (and other specific factors deemed important by the Project Coordinating Committee) will be treated as independent variables to assess their effects on the dependent variables of case outcome.

These basic analyses will be carried out separately within subgroups of the overall data to test for the generality of obtained findings.

With the use of modern computers specific sub-analyses of the individual measures of vocational, behavioral and personality function will be computed to test for both specific and general relationships.

8. *Functional analyses.*

The existence of a large set of data involving large numbers of both counselors and clients will allow for refinement of current measuring instruments. The cases themselves can be grouped according to the degree of improvement reflected in the client case outcome and the relationship to measures of the independent variables can be plotted. At such a point it may be advisable to make standard transformations of existing measures of independent factors to more adequately predict outcome.

In addition frequency analyses of data should reveal other relationships to outcome. This would provide specific information about the kinds of counselor behaviors, the kinds of agency policies, organization and programs as well as behaviors and characteristics that are most closely associated with differential (effective and ineffective) outcomes. This will be replicated within sub-populations to evaluate the generality of obtained findings. Such information would lead to refinement of existing agency programs and services by providing specific information that could be incorporated by administrators into immediate practice.

9. *Pair analysis.*

Of the pairs of clients seen by the counselors (clients A and B per counselor), the level of a given counselor variable, say accurate empathy or length of experience with client A can be used to predict the Final Case Outcome obtained with client B and vice versa. The degree of relationship as reflected in a correlation between the counselor measure obtained with one pair member and the Final Case Outcome obtained with the second pair member would give an estimate of the *degree to which the counselor generally contributes to outcome.* Similar pair analyses can give quantitative estimates of the amount of counselor contribution to client outcome *irrespective* of client level and type of disability, educational level, etc.

The Question of Controls.

In the early exploration of most "treatment procedures" it often seems advisable to compare "treated" to "untreated" control clients. As noted earlier, this assumed that the treatment is a relatively unitary one, an assumption that seems quite untenable in the case of vocational rehabilitation counseling.

The focus of the present program is not upon "treated versus untreated" but instead upon the differential effects of specified levels of amounts of "treatment variables". In this sense the present program is analogous to pharmacological studies of the effects of drugs upon conditioning, or to studies in all basic sciences of functional relationships.

Since considerable "base rate expectancy" knowledge is currently available concerning the rehabilitation progress of vocational rehabilitation clients, the range of rehabilitation rates can be compared to the range of outcome observed under varying types of counselors, agency programs, types of clients, etc.

The present research proposal aims at measuring basic parameters of the vocational rehabilitation process and its outcome on induced vocational and behavioral change. The approach is toward quantitative description of the functional relationships between rehabilitation variables and amount of client vocational, personality and behavioral change.

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